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09/560,234	04/28/2000	Nobuyuki Takamori	49799(801)	3999

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Dike Bronstein Roberts & Cushman  
Edwards & Angel  
P O BOX 9169  
Boston, MA 02209

EXAMINER

NGUYEN, DZUNG C

ART UNIT PAPER NUMBER

2652

DATE MAILED: 02/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/560,234

Applicant(s)

TAKAMORI ET AL.

Examiner

Dzung C Nguyen

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-3 and 7-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's amendment filed on 7/20/02, and the election to the restriction filed on 12/2/02 has been received and entered.
2. Claims 1-17 are presented for examination.

#### ***Election/Restriction***

3. Applicant's had amended claim 7 to be depended on claim 3 which is from group I. Therefore, Group I is now includes claims 1-3 and 7-17.
4. Applicant's election of claims 1-3 and 7-17 in Paper No. 15 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

#### ***Claim Objections***

5. Claims 16 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 16 cannot depend from any other multiple dependdnt claim. See MPEP § 608.01(n). Accordingly, the claim 16 has not been further treated on the merits.

#### ***Claim Rejections - 35 U.S.C. § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

7. Claims 1-2, 7-15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujisawa et al, US patent (6,137,770).

Regarding claim 1, Fujisawa et al, teach a disk cartridge [fig 2] comprising: an optical disk [2] for recording/ reproducing information, and a cartridge case [10] rotatably accommodating the optical disk [2] and being provided with a notch [31] on a side [right side] face thereof, wherein the notch [31] allows an arm of a disk driving device [fig 5] to approach the optical disk [2] when the disk cartridge is inserted in the disk driving device for recording/ reproducing information through a head [75, fig 7] supported by the arm [65] (figs 2-7).

Regarding claim 2, Fujisawa et al teach wherein the optical disk [2] has a center-hub [7] at the center [6] thereof, and the cartridge case [1] has a counter bore [62, fig 7] formed in a recess form on an inside wall on a side opposite to a side where a drive shaft [61] for rotating the optical disk [2] is inserted, the counter bore [62] facing the center hub [7] (see figs 2 and 7).

Regarding claim 7, Fujisawa et al teach a disk cartridge [fig 1] comprising: an optical disk [2] for recording/ reproducing information, and an cartridge case [1] rotatably accommodating the optical disk [2], wherein the cartridge case [1] includes an upper case

[3] and a lower case [4] having an upper opening [9] and a lower opening [8, fig 2], respectively, for allowing the head for recording/ reproducing information to face the optical disk [2] and a shutter [13] for opening and closing the upper and lower openings, the lower case [4] is cut to form the lower opening [8] from a bottom face to a side face (fig 2), and the shutter [13] shields the upper opening along a plane defined by an upper face of the upper case [3] and shields the lower opening along two planes defined by the bottom face and the side face of the lower case [4] (see figs 2-3).

Regarding claim 8, Fujisawa et al teach wherein the shutter [13] includes an upper shutter portion [15] and a lower shutter portion [16] for shielding the upper and lower openings (figs 1-2), a perpendicular portion [14] jointing the upper and lower shutter portions, a pawl [12] for preventing the shutter from coming off and a guide portion [along 17] extending from the perpendicular portion for slidably guiding the shutter [13], and the upper case [3] is sandwiched between the guide portion [17] and the upper shutter portion [9] (see figs 1-2).

Regarding claim 9, Fujisawa et al teach wherein the upper case [3] has a guide groove [25] for slidably guiding the shutter [13] (see fig 2).

Regarding claim 10, Fujisawa et al teach wherein the shutter [13] is provided with a pawl [12] and the cartridge case [1] is provided with a guide groove [25], for allowing sliding movements and preventing the shutter [13] from coming off at the time of

opening and closing the shutter [13] (see fig 2), in an upper case side [3] of an elongated space formed between the upper [3] and lower cases [4] (see figs 1-2).

Regarding claim 11, Fujisawa et al teach wherein the lower case [4] is positioned on a side of a recording face of the optical disk [2], and the shutter [13] includes an upper shutter portion [16] and a lower shutter portion [15] for shielding the upper and lower openings [9 and 8] of the upper and lower cases [3 and 4], respectively, and a guide portion [25] for guiding the movement of the shutter [13], so that the upper case [3] is sandwiched between the upper shutter portion [13] and the guide portion [25] (see fig 3).

Regarding claim 12, Fujisawa et al teach wherein the shutter [13] includes a pawl [12] for preventing the shutter [13] from coming off and the position of the shutter is restricted in a direction perpendicular to a moving direction [A or B] of the shutter by the pawl [12] and a perpendicular portion [14] jointing the upper shutter portion and the lower shutter portion [15 and 16] (see figs 1-2).

Regarding claim 13, Fujisawa et al teach a disk cartridge [1, figs 1-2] comprising: an optical disk [2] for recording information signals; a cartridge case rotatably accommodating the disk [2] and being provided with a first opening [9] and a second opening [8] on upper and lower face thereof, the openings [8 and 9] allowing approach of recording and reproducing means [head] for recording or reproducing the information signals on or from the disk [2]; and a shutter [13] for opening and closing the openings [8 and 9], wherein the first opening [9] formed on one of the upper and lower faces [16 and

15] of the cartridge case [1] has a first opening region [near 6] located in the vicinity of the center of the disk [2] and a second opening region [near 17] extending from the first opening region in a radial direction of the disk to the outside of the disk [2], an edge [edge] of the second opening region on a side in a shutter [13] closing direction in which the shutter [13] closes is formed toward the shutter closing direction as compared with the first opening region and an edge [edge] of the second opening region on a side in a shutter opening direction [B direction] in which the shutter opens is formed toward the shutter closing direction [A direction] as compared with the first opening region, the shutter [13] has a first shutter section [15] for opening and closing the first opening [9], the first shutter section [15] has a first shutter region [upper region] located in the vicinity of the center of the disk [2] and a second shutter region [near 17] extending from the first shutter region in the radial direction of the disk [2] to the outside of the disk, an edge [edge] of the second shutter region [16] on a side in the shutter closing direction is formed toward the shutter closing direction [close direction] as compared with the first shutter region [13] and an edge [edge] of the second shutter region in the shutter opening direction [B direction] is formed toward the shutter closing direction [A direction] as compared with the first shutter region (see figs 1 and 2) .

Regarding claim 14, Fujisawa et al teach wherein the outline of an edge [edge] of the first shutter section [16] on the side in the shutter closing direction is substantially the same as the outline of an edge [edge] of the first opening [9] on a side in the shutter

opening direction, at least in a side where the second shutter region [near 17] is formed rather than the center of the disk [2] in a direction perpendicular to the direction of the movement of the shutter [3] (see figs 1-2).

Regarding claim 15, Fujisawa et al teach a disk cartridge [1, figs 1-2] comprising: an optical disk [2] for recording information signals; and a cartridge case [2] rotatably accommodating the disk [2], wherein the cartridge case [1] has an opening [9] on one face thereof, the opening [9] having a first opening region [area upper 9] located in the vicinity of the center of the disk [2] and a second opening region [area lower 8] extending from the first opening region in a radial direction of the disk [2] to the outside of the disk [2], the disk cartridge [1] has a shutter [13] for opening and closing the openings [8 and 9], the shutter [13] having a first shutter region [A region] located in the vicinity of the center of the disk [2] and a second shutter region [B region] extending from the first shutter region in the radial direction of the disk [2] to the outside of the disk, the second opening region [area lower 8] is formed toward a direction in which the shutter closes [A] as compared with the first opening region [region A], and the second shutter region [Region B] is formed toward the direction in which the shutter closes [in direction B] as compared with the first shutter region (see figs 1-2).

Regarding claim 17, Fujisawa et al teach a disk cartridge [fig 1] comprising: an optical disk [2] for recording information signals; and a cartridge case [1] rotatably accommodating the disk [2] (figs 1-2), wherein the cartridge case has a third opening [9,

fig 2 ] which is located in the vicinity of the center [6] of the disk and allows a spindle motor [61, fig 6] to approach the disk [2] and a fourth opening [8] which is formed separately from the third opening [9], extending in a radial direction of the disk to the outside of the disk [2], and allows a pickup [head, 71, fig 7] to approach the disk [2], the disk cartridge [1] has a shutter [13] having a first shutter region [area 15] for opening and closing the third opening [9] and a second shutter region [16] for opening and closing the fourth opening [8], the first shutter region [15] and the second shutter region [16] being formed in one piece [shutter 13], the fourth opening [8] is formed toward a direction in which the shutter [13] closes as compared with the third opening [9], and the second shutter region [16] is formed toward the direction in which the shutter closes as compared with the first shutter region [15](see figs 2-3 and 6-7).

*Claim Rejections - 35 U.S.C. § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujisawa et al, US patent (6,137,770) as applied to the rejection of claims 1-2 in paragraph 7 above.

Regarding claim 3, Fujisawa et al do not teach a) wherein the cartridge case has a thickness less than 5 mm and an area smaller than 65 mm square; b) the optical disk has a diameter less than 64 mm and a thickness less than 0.8 mm and forms a track having a pitch less than 0.6  $\mu\text{m}$  so that the optical disk allows information of 650 MB or more to be recorded thereon.

Regarding a), it would have been obvious to one of ordinary skill in the disc drive art at the time the invention was made to form the cartridge case has a thickness less than 5 mm and an area smaller than 65 mm square as claimed through routine lab experimentation and optimization because the smaller range of thickness will save the cost and reduce the size of the cartridge case.

Regarding b), "Official Notice" is taken of the fact that the standard optical disk has a diameter less than 64 mm and a thickness less than 0.8 mm and forms a track having a pitch less than 0.6  $\mu\text{m}$  so that the optical disk allows information of 650 MB or more to be recorded thereon. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the optical disk of Fujisawa et al as a

standard optical disk because it would allow the cartridge case of Fujisawa et al to be used the standard optical disk available on the market.

10. Applicant's arguments with respect to claims 1-3 and 7-17 have been considered but are moot in view of the new ground(s) of rejection.

*The prior art made of record and not relied upon*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- a. Osishi, US. Patent (5,761,015).
- b. Hashimoto, US patent (6,298,034).
- c. Otsuka et al, US patent (5,831,967).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung Nguyen whose telephone number is (703) 305-9695. The examiner can normally be reached on Monday-Friday from 8:30 am to 6:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900 and fax number is (703) 872-9314.

Dzung Nguyen

2/10/03

  
HOA T. NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER, 2600  
2/10/03